REQUIREMENTS ANALYSIS

COORDINATION

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Version

0.0.0

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# INTRODUCTION

## Purpose

The proposed system enables students to evaluate their teachers anonymously through a secure voting scheme.

## Reference Documents

Atsushi F., Taatsuaki O., Kazuo O., 1992, *A Practical Secret Voting Scheme for Large Scale Elections* , https://people.csail.mit.edu/rivest/voting/papers/FujiokaOkamotoOhta-APracticalSecretVotingSchemeForLargeScaleElections.pdf

# DESCRIPTION

## Product Context

The process starts with the students filling out an evaluation form (ballot), which is then encrypted using a blind signature technique. This encrypted form is sent to the administrator who, after verifying the student's eligibility, signs the encrypted form and sends it back to the student.

The students then send their signed, encrypted evaluations to the counter via an anonymous communication channel. The counter collects all the evaluations and publishes a list of received ballots. To maintain anonymity during the opening stage, students send their encryption keys anonymously, allowing the counter to decrypt the evaluations. The counter checks the validity of each evaluation, counts them, and then announces the results. This process ensures the anonymity of the students, while also ensuring fairness in the evaluation process.

## User Classes and Characteristics

Include a description of all system users and their usage characteristics.

|  |  |
| --- | --- |
| **USER CLASS** | **CHARACTERIS S** |
| Students | Voters – limited permissions on the system |
| Administrator | Verifies the student's eligibility and signs the encrypted form. |
| Teachers | Receivers – limited permissions on the system |

## Operating Environment

## To be determined

# STAKEHOLDERS

|  |  |
| --- | --- |
| **STAKEHOLDER** | **ROLE** |
| Coordinator | This person is responsible for leading the project from initiation to completion, holding all stakeholders and resources to deadlines. |
| Evaluator | This role is responsible for assessing and grading the project. |
| Students | They will then be responsible for implementation of the system and the documentation for the project |

# REQUIREMENTS

Include all of the requirements you collected from stakeholders.

The solution should provide an anonymously way for student to evaluate their teachers.

The solution should verify the student's eligibility.

The solution should provide real-time reports. (subjected to change)

The solution should be easy for all stakeholders to access and use.

The solution should provide a secure/encrypted way to send/receive the evaluations.

The solution should integrate with faculty email system.

The solution should not allow student to evaluate more than 1 time.

## Performance Requirements

The solution should process 10 evaluation processes per second in peak load.

The solution should be available 24/7 for the entire duration of the year.

The solution should process any action within no more than 3 seconds.

## Security Requirements

The solution should not allow any unenrolled students to access/vote.

The solution should encrypt all the evaluations/sensitive data.

The solutions should not store any personal data.

The solution should prevent malicious entities to temper with the voting results.

## Usability Requirements

The solution should be intuitive to use by all users.

The solution should not present critical bugs.

The solution should allow faculty entities to access it remotely.

The solution should have provide a protection degree to which protects the users against mistakes.

## Other Requirements

To be determined